

REMARKS

Favorable reconsideration of this application, is respectfully requested.

The specification is amended by the present response to include appropriate headings. Additionally, a new Abstract believed to be in more proper format under United States practice is submitted herein.

Further, substitute Figs. 1-10 are presented herein. Substitute Figures 1-4 are now labeled as "Prior Art". Further, all the substitute figures now label each element previously depicted as a blank box.

Claims 19-36 are pending in this application. Claims 1-18 are canceled without prejudice and new claims 19-36 are presented for examination. Claims 5-18 were objected to under 37 C.F.R. 1.75(c). Claims 1, 2, and 4 were objected to for informalities. Claims 1, 2, and 4 were rejected under 35 U.S.C. § 102(a) as anticipated by publication "Iterative Multiuser Detection Using Antenna Arrays and FEC on Multipath Channels" to Reed et al. (herein "Reed"). Claim 3 was rejected under 35 U.S.C. § 103(a) as unpatentable over Reed in view of publication "Multi-User Detection for DS-CDMA Communications" to Moshavi (herein "Moshavi").

Addressing first the objection to claims 5-15 under 37 C.F.R. § 1.75(c), that objection is obviated by the present response as those claims are canceled by the present response. Further, the new claims are written to not present any improper multiple dependencies.

Addressing now the objection to claims 1, 2, and 4 for informalities, the new claims are written to avoid the noted informalities.

Addressing now the rejection of claims 1, 2, and 4 under 35 U.S.C. § 102(a) as anticipated by Reed, and the rejection of claim 3 under 35 U.S.C. § 103(a) as unpatentable over Reed in view of Moshavi, that rejection is traversed by the present response.

New claims 19-36 are similar in scope to original claims 1-18. However, applicants respectfully submit new independent claim 19, similar to original claim 1, distinguishes over Reed.

The present specification discusses the system in Reed at page 4, lines 5-21. As discussed in that portion, the method of Reed presupposes that the coefficients of attenuation, the phase rotations, and the directions of arrival of all of the paths of all of the users are determined. However, that determination can often be imprecise resulting in an imperfect or even erroneous elimination of the multi-user interface.

The present invention overcomes such deficiencies in Reed.

The system of Reed does not disclose an operation of “estimating the data transmitted by the user from the estimation of the signal transmitted”, as recited in new independent claim 15. With respect to that feature, the outstanding office action appears to indicate that Reed “teach using soft interference cancellation to generate soft estimates of the symbols”.¹ However, that estimate of symbols does not appear to correspond to the claimed “estimating the data transmitted by the user from the estimation of the signal transmitted”.

Further, as Reed fails to teach or suggest that feature, Reed does not estimate the contribution of the user of the signal received by the different antennas “from the data estimated at the estimating (b)”, as also recited in new independent claim 19.

Thereby, new independent claim 19, and the claims dependent therefrom, are believed to distinguish over Reed.

Moreover, no teachings in Moshavi are believed to overcome the above-noted deficiencies in Reed.

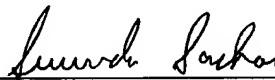
¹ Office Action of January 25, 2005, page 5, lines 10-11.

Thereby, applicants respectfully submit new independent claim 19, and claims 20-36 dependent therefrom, distinguish over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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IN THE DRAWINGS

The attached sheets of drawings include changes to Figs. 1-10. These sheets, which include Figs. 1-10, replace the original sheets including Figs. 1-10.

Attachment: Replacement Sheets